

DOCUMENT RESUME

ED 143 380

JC 770 404

AUTHOR Larkin, Paul G.
 TITLE How Many Students Are We Losing? Attrition and Inefficiency in Instructional Operations Re-Examined. Report No. 77-11.
 INSTITUTION Prince George's Community Coll., Largo, Md. Office of Institutional Research.
 PUB DATE Mar 77
 NOTE 30p.
 EDRS PRICE MF-\$0.83 HC-\$2.06 Plus Postage.
 DESCRIPTORS Academic Failure; Community Colleges; Dropout Rate; *Dropout Research; *Dropouts; Institutional Research; *Junior Colleges; *Junior College Students; Pass/Fail Grading; School Holding Power; *Withdrawal
 IDENTIFIERS *Course Withdrawal

ABSTRACT

In this study of student attrition rates at Prince George's Community College, three indicators were analyzed: (1) term-to-term attrition, (2) within-term attrition, and (3) course "inefficiency" (failure). Data from 1972-73 through 1976-77 indicated that fall to spring attrition (term-to-term) was approximately 34%. Spring to fall averaged 47%, with graduation, successful transfers, and returns of dropouts tending to reduce this to 20%. Within-term withdrawals averaged 8% from 1971 to 1976, with 28% reporting work conflict as their withdrawal reason in 1976. Although course withdrawals decreased when non-punitive grading practices were established in 1974, highs reported in 1976 included 26% in chemistry, 18% in physics, and 17% each in engineering, political science, and psychology, compared with a college-wide average of 12%. Students not passing the course (course inefficiency) averaged 27% with higher failure rates in developmental studies, English, science-math, social sciences, and business technology. Early warning notices in fall 1976, did not change retention rates. Recommendations included allowing students to drop courses and petition for full or partial credit, based on course objectives being met; developing a student contract system; using continuing education units; and training faculty to identify student objectives. Attrition and grade data and a summary analysis of the spring semester 1977, are appended. (RT)

 * Documents acquired by ERIC include many informal unpublished *
 * materials not available from other sources. ERIC makes every effort *
 * to obtain the best copy available. Nevertheless, items of marginal *
 * reproducibility are often encountered and this affects the quality *
 * of the microfiche and hardcopy reproductions ERIC makes available *
 * via the ERIC Document Reproduction Service (EDRS). EDRS is not *
 * responsible for the quality of the original document. Reproductions *
 * supplied by EDRS are the best that can be made from the original. *

Paul G. Larkin

PRINCE GEORGE'S COMMUNITY COLLEGE

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC) AND
THE ERIC SYSTEM CONTRACTORS

Report No. 77-11: How Many Students Are We Losing?
Attrition and Inefficiency in Instructional
Operations Re-Examined

ED143380
Introduction

A recent study in California raised questions concerning criteria for evaluating student attrition (*Through the Open Door*, February, 1976). The study assumed that few students (probably less than 10 percent) would get the A.A. degree. Going on this assumption as a framework, reasons were sought for course inefficiency (as defined by low course completion rates). Some of the reasons were listed as follows (Summary, pp. ii-iii):

1. Students may not have expected credit, since they did not have credit as their objective;
2. Students may have achieved their objectives before the end of the semester, but they had no way to show their achievement besides final exams;
3. Students may have registered but had their plans change after the official "third week of class" and before the final week; and
4. Students may have encountered schedule conflicts as time progressed.

Questions about attrition lead to further questions about student goals and values. What can a college do to increase retention by changes in policy, programs, or services? Does this question assume that persistence is "good," and non-continuation is "bad"? The California research indicated that assumptions like these need to be tested, in the light of available evidence.

A recent research report on student progression (Report No. 77-2) generated similar inquiries about student attrition. The Extension Centers Office asked how we could reduce attrition to improve effective service. Someone in Admissions asked if we could increase credit hours by reducing course-completion inefficiencies. One faculty member asked about low pass rates, what were their causes and which divisions and departments were the most inefficient? The present report addresses broad questions of student attrition, updating previous reports on this same topic, and attempting to gather the facts that we know so as to clarify what we do not know.

Defining the Problem

Several years ago, a report entitled "College Holding Power" (Report No. 74-31) defined the problem as follows:

Measures of enrollment attrition are needed to determine the degree of disruption in student flow from one semester to the next. It is tempting to use the concept "dropout," but this suggests social disapproval. Since, however, the college student is attending because he or she chooses to, there is no disgrace if the individual does not achieve a degree. On the contrary, enrollment attrition may be partially accounted for by the achievement of student goals besides the degree, such as the landing of a good job on a full time basis. The dropout concept is therefore inappropriate at the community college. Attrition is a more abstract concept, and relates to the gathering of facts and the solving of problems connected with College service. There is suggested a respect for the student, and a wondering as to how to help the student achieve many different goals. Enrollment attrition, therefore, and not College dropouts, is the subject matter of this report.

Various indicators were developed for assessing attrition:

1. *Term-to-term attrition* calculated by dividing non-returns from the previous term by the total number who could have returned.
2. *Within-term attrition*, measured either by formal student withdrawals from the College, or by course drops before the final week of class.
3. *Course inefficiency rates*, defined by the number of students not passing the course (for whatever reason) divided by the initial number of persons signing up for the course.

These types of attrition and inefficiency will be discussed in the sections which follow.

Between-Term Attrition

The attrition factor most clearly affecting credit hours is the rate of students not returning from the previous term. Term-to-term attrition means the percentage of students *not-returning*. As shown in Table 1, Fall-to-Spring attrition has tended to be approximately 34 percent for the past five years. Spring-to-Fall attrition has been closer to 47 percent on the average. This may be due to the long summer disruption and successful job placements as well as graduations. Steps to make continuity easier and reduce disruption through changes in summer school policy could facilitate pursuit of academic goals for some students. The extent of facilitation would depend on the degree to which summer sessions would be re-programmed to make continuing study a smooth-flowing process.

A practical understanding of between-terms attrition requires that you consider readmits on the one hand, and graduations or transfers on the other. These sources of variation can counterbalance each other from the point of view of net attrition. In Fall 1974, for example, there were 997 readmits. There were 807 graduates in June. The net effect of graduations and returns of stop-outs was on the positive side.

Within-Term College and Course Withdrawals

The rate of within-term withdrawals from the College has not changed much since Fall 1971, as measured by the formal process of withdrawal from the College. This should not be confused with course withdrawal. A student withdrawing from the College would usually be dropping several courses at once. The College withdrawal rate in this sense was 9 percent in Fall 1971 and 8 percent in Fall 1976.

Caution is needed in interpreting formal withdrawal. College withdrawal is limited to those students who formally "sign out" from the College. Many students stop attending without ever reporting in. They often show up as "failures" on the instructor's grade book, indistinguishable from persons who failed the final test. The student who leaves and just never comes back, without a word, is the type of dropout generating the most uncertainty as to what to do about it.

Students who undergo the formal withdrawal procedure are asked to participate in an exit interview. They are asked their reasons for leaving the College. As shown in Table 3, work conflict represents the chief reason given that the College could do anything about administratively. There could be, for example, changes in course schedules where trouble spots were found.

Course withdrawals within-term can also be calculated. If the student "drops" between the third and final week of class, this is taken to be a course withdrawal. Changing grading practices in the Seventies, when non-punitive grading was experimented with, affected course withdrawal rates. (See Table 2.)

When course withdrawal rates were compared in terms of Technical and Career versus Arts and Sciences, both reflected the college average of 12 percent. But departmental rates varied from no withdrawal to 26 percent withdrawal. Within Arts and Sciences, Chemistry had the highest fall 1976 withdrawal rate at 26 percent. Other withdrawal rates over the 12 percent College average were Physics (18 percent), Engineering (17 percent), Political Science (17 percent), and Psychology (17 percent). Among Technical and Career courses, Secretarial Science and Medical Lab offerings both had high course withdrawal rates, both at about 16 percent, compared with the overall College norm of 12 percent.

Inefficiency Determined by Final Grades

Pass rates were reviewed to see if they contributed insights into course inefficiency. Final grade distribution was found to be relatively stable for the past several years (see Table 5). On the basis of final grade distribution, it was possible to calculate a measure of course inefficiency. In this context, inefficiency means the rate of students not-passing the course. Inefficiency in this sense was found to have been relatively stable since 1968 (see Table 6).

The recent College pass rate of 73 percent compared not unfavorably with a 76 percent pass rate (and accompanying 24 percent inefficiency rate) for California community college courses, as reported in the 1976 study (*Through the Open Door*, p. 46). Part of the 24 percent inefficiency rate in California was explained by student withdrawals (14 percent), and the rest by course failures combined with other reasons. The Prince George's observables and the California observables were therefore somewhat similar.

When current inefficiency comparisons were made by academic areas, it was found that the following disciplinary categories had greater inefficiency rates than the College average of 27 percent:

1. Developmental Studies (34 percent),
2. English Studies (31 percent),
3. Science-Math (29 percent),
4. Social Sciences (29 percent), and
5. Business Technology (29 percent).

Inefficiency rates for these same areas between fall 1973 and fall 1976 were also compared. It was found that Developmental Studies and Science-Math were increasing their course efficiency, while English Studies and Social Science were decreasing in efficiency. (See Table 7.)

In the Technical and Career area, Business Technology remained at an above-average level of inefficiency between 1973 and 1976, at 29 percent. Scientific and Service Technologies were below average in inefficiency rate, but increasing in this measure of inefficiency. Nursing and Allied Health had the lowest inefficiency rate, at 9 percent, associated at least in part with the commitment and personal attention enjoyed by students and faculty alike in this program area.

An Experiment with Early Warning

In fall 1976, the College sent early warning notices to students identified by instructors as not attending class. If some students were to respond, retention would be marginally increased. Grade point average performance was theorized to be crucial. Students with grades below C do not anticipate being permitted to graduate. They therefore tend to drop out beforehand (Astin, 1975). Mere mail notice to absentees was not found to change retention rates. To impact on retention, intervention would have to be more personal or more thorough.

A 1974 study describing why students quit community service courses at two community colleges in California indicated that faculty members usually did not know why students were quitting. Most dropouts did not consult a teacher or counselor (one in five who tried were unsuccessful). Work conflict was the main reason given for course drops (Brightman, 1974). This study raises questions as to how well the instructor should be kept informed about student course goals, and be provided with student mailing addresses so as to be able to correspond more individually and personally with absentees.

Discussion of the Findings

Between-term and within-term attrition findings need to be related to each other, and to course inefficiencies as well. Spring-to-Fall attrition would be 33 percent rather than 47 percent, for example, if you subtracted the influence of graduations. The re-admission factor takes "real" between-term attrition down another five or ten percentage points. Attrition thus approaches the 25 percent level. If successful transfers are taken into account, "real" attrition is still lower, in the neighborhood of 20 percent.

This information provides background for re-evaluating course inefficiency rates. Given a "non-pass" rate on the order of 27 percent, what factors are known? Withdrawals from the College average 8 percent of the student body within a semester. This accounts for nearly one-third of the inefficiency. Many students who withdraw intend to come back, perhaps four out of five who observe the formal procedure. Course drops between the third and final week of class, representing approximately 12 percent of the initial course enrollments, overlap with College withdrawals. (There is no way of knowing the intersection of the two sets. But we do know that 44 percent of course inefficiency is sufficiently conscious and deliberate to result in a course "drop.") We therefore know something about the level of consciousness and awareness with which withdrawal takes place.

When we compare what we know about subject matter course drop rates and what we know about subject matter inefficiency rates, considerable inefficiency is "accounted for." Within-term course drops, as opposed to course failures, can be related to the highest non-pass measures according to subject matter as follows:

<u>Subject Matter</u>	<u>Drop Rate</u>	<u>Inefficiency Rate</u>
Developmental	8%	34%
English	12	31
Science-Math	14	29
Social Sciences	12	29
Business	14	29

Developmental Studies and English need specific evaluation to determine non-student sources of inefficiency. In other subject matters, nearly one-half of the inefficiency is associated with within-process course withdrawals. Institutional scheduling and student self-scheduling must be considered as factors. Further inefficiency may be due to individual student factors or instructional situations. More individual instruction, greater individual attention and guidance, and improved course scheduling are frequently mentioned ways to respond. But not enough is known about individual student goals (and goal-modifications as they interact with course inefficiency) to emphasize one kind of policy rather than another. We need some way of knowing student course objectives, perhaps in connection with the course enrollment process. This would allow insights as to what it means when a student does not successfully pass a given course. Research into course objectives of students is recommended for faculty members and departments curious about their individual course inefficiencies, as a first step toward improved retention measures.

Implications of Other Research for Policy

The California study suggested that student goals are changing. As older part-time students have enrolled with different objectives for educational, career and personal growth, "education for part time adult students has become the dominant function of the Community Colleges." As a result, effective service is not adequately measured by traditional outcomes (course and program completions).

Institutional Research reports support this California perspective. Of 786 off-campus students recently surveyed, (Report No. 77-5), one out of four was not aiming at the A.A. degree. Another recent report (77-10) relates adult development and programs of study to age groups. The evidence is that student program-goals vary with age. For every hundred students enrolling in the fall, less than ten will get the A.A. degree in the spring. This too has implications for goals. Is there so much "screening" of the unfit, or so much illusion in goal-setting? One research challenge is to understand the dynamics of student goal-setting. How does this process work? How do incentives, motivations, and goal-setting interact? How do symbolic tokens (credits, degrees) act as intermediate steps toward the achievement of more ultimate goals? Questions such as these must be the subject of further research.

The California study yielded certain recommendations which could be considered at Prince George's. Examples are as follows:

1. Students withdrawing from courses could be encouraged to take "challenge" examinations for credit. Consideration could be given to allowing students to drop courses and petition for full or partial credit, based on course objectives being met.
2. The Records Office could be encouraged to work toward a contract system involving students and their counselors or advisors, to provide for individualized objectives and educational plans for achieving these objectives.
3. Consideration could be given to the use of continuing education units (CEU's) for students not attempting credit. Under this proposal, Community Services students would be permitted to enroll for any class that has room with CEU's awarded on the basis of a contract made through the Community Services Office.
4. Efforts could be made to involve faculty members in staff development or in-service training that would identify changing student characteristics and objectives, and discover ways and means to respond appropriately.

Recommendations such as these need to be evaluated in the light of local experience. The College has experimented with non-punitive grading. The decision was made to retain the previously existing system. Will these sanctions (academic grades) be used to "punish the unfit" and "screen out the unworthy" from graduate school, regardless of student goals? The community college mission accommodates developing adults aged 25, 35, or even 45. How do failing grades and student suspensions support this mission? Would a review of academic standards and regulations with this question in mind be worthwhile? Policy appears to be worth considering whereby

failing grades would be removed as a barrier to college continuation. The rationale for academic dismissals and suspensions dates to a time when classroom space was scarce. Students were more abundant than places. Screening-out made sense. Nowadays many colleges are competing for students. Enrollment decline is a problem. Policies favoring screening-in and keeping-in, rather than rejecting students, appear to be worth considering. Certificates could also be promoted for those whose grade-point average does not meet degree standards.

*Paul Larkin, Director
Institutional Research*

3/14/77

Table 1
 PRINCE GEORGE'S COMMUNITY COLLEGE

Five-Year Between-Term Attrition, Fall 1972 to Spring 1977

	1972-73		1973-74		1974-75		1975-76		1976-77	
	<u>Fall</u>	<u>Spring</u>								
Returning	3,618	5,207	4,226	6,235	4,660	6,638	5,612	7,688	6,028	7,789
Readmits	665	723	860	841	997	1,076	1,109	1,163	1,220	1,357
New to PGCC	3,605	1,695	4,172	1,868	4,068	2,542	4,709	2,593	4,667	2,684
TOTAL	7,888	7,625	9,258	8,944	9,725	10,256	11,430	11,444	11,915	11,830
Non>Returns as a % of Previous Term										
Number	3,451	2,681	3,399	3,023	4,284	3,618	4,644	3,742	5,416	4,126
Percent	49%	34%	45%	33%	48%	37%	45%	33%	47%	35%

SOURCE: *Institutional Research Office, based on Computer Science Center printouts.*

2/17/77

Table 2

PRINCE GEORGE'S COMMUNITY COLLEGE

Within-Term Measures of Attrition, Fall 1971 to Fall 1976:
College Withdrawals and Course Withdrawals

	Fall 1971	Spring 1972	Fall 1972	Spring 1973	Fall 1973	Spring 1974	Fall 1974	Spring 1975	Fall 1975	Spring 1976	Fall 1976
Within-Term Student Withdrawals from PGCC											
Number	717	578	925	439	667	629	578	432	753	802	922
Percent	9%	8%	11%	5%	9%	7%	6%	4%	7%	7%	8%
Course Withdrawals											
N.A.	N.A.	N.A.	4,128	3,286	4,305	3,481	2,330	1,519	3,193	3,297	4,182
Course Enrollments											
N.A.	N.A.	25,026	23,587	28,943	26,909	29,699	29,784	34,390	33,487	35,673	
Percent Withdrawning	N.A.	16%	13%	14%	12%	7%*	5%	9%	9%	12%	

* Note: In Fall, 1974, course withdrawals were tabulated as "NC" (no credit).

SOURCE: Institutional Research Office, based on Computer Center printouts.

2/17/77

12

13

Table 3

PRINCE GEORGE'S COMMUNITY COLLEGE
Reasons for Student Withdrawal

	Fall 1975		Fall 1976	
	No.	%	No.	%
<i>Directly subject to College action</i>				
Financial	26	3	49	5
Lack of interest	25	3	34	4
Work conflict	207	27	256	28
Academic difficulty	21	3	22	2
<i>Not directly subject to College action</i>				
Personal	122	16	143	16
Transferring	29	4	36	4
Armed Services	18	2	16	2
Moving Away	41	5	51	5
Health	106	14	123	13
<i>Miscellaneous</i>				
Other	158	21	192	21
TOTAL	753	100%	922	100%

SOURCE: Institutional Research Office, based on Computer Science reports.

2/17/77

Table 4
 PRINCE GEORGE'S COMMUNITY COLLEGE

Attrition Rates by Divisions and Departments for Fall 1976:
 Third Week to Final Week of Class

<u>DIVISIONS AND DEPARTMENTS</u>	<u>Third Week</u>	<u>Final Week</u>	<u>No. of Drops</u>	<u>Attrition Rates</u>
TECHNICAL AND CAREER EDUCATION	9,549	8,449	1,100	12%
<i>Business Studies</i>	5,033	4,338	695	14%
Secretarial Science	839	698	141	16
Business	4,194	3,640	554	13
<i>Scientific & Service Technology</i>	3,458	3,104	354	10%
Data Processing	1,445	1,245	200	13
Engineering Technology	664	583	81	12
Recreation Leadership	260	231	29	11
Fire Science Technology	98	93	5	5
Law Enforcement	991	952	39	3
<i>Nursing and Allied Health</i>	1,058	1,007	51	5%
Medical Laboratory	49	41	8	16
Respiratory Therapy	34	29	5	14
Health	70	64	6	8
X-Ray Technology	80	73	7	8
Dental Assisting	88	85	3	3
Nursing	577	557	20	3
Early Childhood Development	67	66	1	1
Mental Health	78	77	1	1
Medical Records Technology	15	15	0	0
ARTS & SCIENCES	26,124	23,042	3,082	12%
<i>Science, Math, Engineering</i>	6,497	5,586	911	14%
Chemistry	486	355	131	26
Physics	298	242	56	18
Engineering	95	78	17	17
Biology	1,322	1,149	173	13
Mathematics	3,575	3,113	462	12
Physical Science	721	649	72	9

Table 4. cont'd.
Attrition Rates by Divisions
& Departments for Fall 1976, etc.

<u>DIVISIONS AND DEPARTMENTS.</u>	<u>Third Week</u>	<u>Final Week</u>	<u>No. of Drops</u>	<u>Attrition Rates</u>
<i>ARTS & SCIENCES (cont'd.)</i>				
English Studies	4,307	3,782	525	12%
Social Sciences	6,764	5,901	863	12%
Political Science	719	592	127	17
Psychology	1,827	1,520	307	16
Social Science	107	92	15	14
Geography	281	242	39	13
Economics	1,098	979	119	10
Sociology	989	884	105	10
Anthropology	215	196	19	8
Behavioral Science	87	82	5	5
History	1,441	1,314	127	8
Humanities	4,091	3,697	394	9%
Music	667	583	84	12
Philosophy	374	330	44	11
Art	869	783	86	9
Speech	1,762	1,600	162	9
Foreign Languages	419	401	18	4
Physical Education, Health & Recreation	2,237	2,030	207	9%
Physical Education	1,973	1,783	190	9
Health	264	247	17	6
Other	2,228	2,046	182	8%
Developmental Math	1,168	1,050	118	10
Developmental Reading	500	447	53	10
Developmental English Education	549	504	45	8
	11	45	N.A.	N.A.
TOTAL	35,673	31,491	4,182	12%

SOURCE: Institutional Research Office, based on Computer Science printouts.

2/18/77

Table 5
 PRINCE GEORGE'S COMMUNITY COLLEGE
 Final Grade Distribution

	<u>A</u> No.	<u>A</u> %	<u>B</u> No.	<u>B</u> %	<u>C</u> No.	<u>C</u> %	<u>D</u> No.	<u>D</u> %	<u>P</u> No.	<u>P</u> %	<u>N.C. or F</u> No.	<u>N.C. or F</u> %	<u>OTHER</u> No.	<u>OTHER</u> %
Fall 1974	6,320	21%	7,281	25%	5,596	19%	1,371	5%	834	3%	4,800	16%	3,497	11%
Spring 1975	6,693	22	7,339	24	5,559	18	1,424	5	709	2	5,608	18	3,002	11
Fall 1975	7,082	20	8,329	24	6,496	18	2,076	6	743	2	5,147	15	5,254	15
Spring 1976	7,506	22	8,493	25	6,065	18	1,908	6	529	2	4,775	14	4,989	14
Fall 1976	7,548	21	8,678	24	6,558	18	2,094	6	664	2	4,595	13	6,256	16

SOURCE: Institutional Research Office, based on Computer Science Center Report STU265.

2/17/77

Table 6

Prince George's Community College

COURSE PASS RATES AND COURSE ATTRITION RATES, 1968-1976

	<u>Initial Enrollments</u>	<u>Successfully Completed Courses*</u>	<u>Course Attrition</u>
Fall 1976	36,393	26,544	73%
Spring 1976	34,265	25,173	73
Fall 1975	35,127	25,580	73
Spring 1975	30,334	22,307	74
Fall 1974	29,699	22,060	74
Spring 1974	27,466	20,021	73
Fall 1973	29,523	21,583	73
Spring 1973	23,941	18,609	78
Fall 1972	25,524	18,697	73
Spring 1972	22,355	16,875	75
Fall 1971	23,659	16,912	71
Spring 1971	19,779	14,588	74
Fall 1970	21,997	15,890	72
Spring 1970	17,210	12,688	74
Fall 1969	19,274	13,424	70
Spring 1969	13,090	10,080	77
Fall 1968	15,969	11,481	72

* A,B,C,D, Towards Passing, Audit, or Pass.

SOURCE: Institutional Research Office, based
on annual reports from the Computer
Science Center.

2/17/77

Table 7
 PRINCE GEORGE'S COMMUNITY COLLEGE
 Course Inefficiency Rates by Division, Fall 1973 and Fall 1976

<u>Division</u>	<u>Fall 1973</u>			<u>Fall 1976</u>		
	<u>Enrollment</u>	<u>Non- Completions</u>	<u>Inefficiency Rate</u>	<u>Enrollment</u>	<u>Non- Completions</u>	<u>Inefficiency Rate</u>
ARTS & SCIENCES	23,786	6,593	28%	26,661	7,396	28%
Developmental	1,946	760	39	2,355	801	34
English	4,297	1,203	28	4,405	1,365	31
Science/Math/Engineering	4,654	1,434	31	6,542	1,871	29
Social Sciences	6,955	1,954	28	6,945	2,018	29
Humanities	3,783	827	22	4,165	905	22
Physical Education	2,151	415	19	2,249	436	19
Recreation						
TECHNICAL AND CAREER	5,737	1,347	23%	9,732	2,453	25%
Business Technology	2,456	720	29	5,143	1,498	29
Scientific & Service	2,405	517	21	3,594	869	24
Technologies						
Nursing & Allied Health	876	110	13	995	86	9
TOTAL	29,523	7,940	27%	36,393	9,849	27%

SOURCE: Institutional Research Office, based on Computer Science reports.

3/1/77

Sources

Astin, Alexander, *Preventing Students from Dropping Out*, Jossey Bass, San Francisco, 1975.

Brightman, Richard W., "When and Why Students Quit Community Service Courses," Office of Institutional Research Report, Coast Community College District, Costa Mesa, California, May 1974.

California Postsecondary Education Commission, *Through the Open Door, A Study of Enrollment and Performance Patterns in California's Community Colleges*, February 1976.

James, David, "Effects of a Mid-Semester Intervention Process on Course Pass Rates and Course Attrition Rates at Prince George's Community College," *Practicum Report, Prince George's Community College*, January 1977.

Larkin, Paul G., "Analysis of Pass Rates for Final Grades, Fall 1974 through Spring 1976," Report No. 76-28, Office of Institutional Research, November 15, 1976.

Larkin, Paul G., "Retention and Attrition, Academic Year 1974-1975," Report No. 75-7, Office of Institutional Research, March 14, 1975.

Larkin, Paul G., "College Holding Power, and Indicators of Enrollment Attrition 1971-1974," Report No. 74-31, Office of Institutional Research, October 31, 1974.

Larkin, Paul G., "Student Attrition by Subject Matter Areas for Fall 1971," Report No. 73-7, Office of Institutional Research, March 5, 1973.

Larkin, Paul G., "An Analysis of Pass Rates for 1972 Summer Session Courses," Report No. 72-21, Office of Institutional Research, October 13, 1972.

Larkin, Paul G., "Summary of Final Grades According to Pass Rates by Subject Matter Areas for the Fall Terms of 1970 and 1971," Report No. 72-3, Office of Institutional Research, March 1, 1972.

Larkin, Paul G., "Final Grade Report and Summary of Enrollments for All Courses: Fall Term 1970," Report No. 71-7, Office of Institutional Research, April 23, 1971.

3/3/77

APPENDIX

PRINCE GEORGE'S COMMUNITY COLLEGE

Report No. 77-35: Increased Course Attrition in Spring 1977

Introduction

One definition of efficiency is the ratio of energy supplied to a system (inputs) to the useful energy delivered (outputs). An application of this concept is the ratio of successful course completions to third week of class enrollments as a measure of course efficiency. The resulting figure expressed as a percentage relates course successes to potential successes. The more the successes (meaning passing the course as opposed to not passing), the more the efficiency. Inefficiency in this context would be non-successes as a percentage of possible successes, suggesting that some of the energy that went into the course was "wasted." (There is no implication of "blame" here. Perfect efficiency, for example, might imply meaningless standards or thoughtless final grades. There is an assumption, however, that more students could achieve high standards through marginal improvements in instruction.) The present report applies this concept of efficiency and inefficiency to Collegewide attrition levels during the spring term of 1977. The term attrition is used as it has been in previous reports (see appendices).

Previous Reports

Earlier reports have examined fall and spring pass rates over a number of years (76-22). They have assessed attrition and inefficiency according to a variety of measures (74-31,77-11). The present report partially updates these previous studies through the spring term of 1977. There is a view toward the question, are we improving our efficiency? What is happening to attrition at a time when student retention has become a focus of attention for the College's marketing effort? In preparation for the fall term of 1977, what does the faculty need to know about the status of the College's course inefficiency?

The Data Base

As shown in Table 1, final grade distributions selected at the same point in time each year represent the data base for comparisons. It is assumed that modifications in the data base are not changing greatly after the official reporting date from one year to the next.

Summary of Passing and Non-Passing Grades

Course efficiency decreased by a percentage point in spring 1977, as compared with the previous four terms (See Table 2.) In comparison with spring 1976, as indicated in Table 1, the number of grades recorded increased in Spring 1977 to about 600 more than the previous year. But the number of passes was approximately 60 more, while the number not passing was approximately 340 more. As a result, course efficiency (as defined above) decreased.

Long-Term Trends

As shown in Table 3, the 28 percent attrition rate for Spring 1977 was not the highest in the College's history. But it was relatively high in comparison with recent years. Between 1968 and fall 1971, an attrition level of 28 percent was ordinary for the fall term. Attrition remained below 28 percent between fall 1971 and spring 1972, a period spanning over five academic years.

Discussion

The present report is descriptive. Reasons for change in attrition or efficiency are beyond its scope. There is a dearth of relevant information available for analytical purposes. Individual divisions and departments might consider explanations for their individual increases in attrition, with enhanced awareness of the implications of attrition for the student and for the College. The need to facilitate student achievement of instructional goals without any dilution of quality or standards may point up the increasing desirability of individual faculty members knowing the academic goals of each of their students, part time as well as full time. In this way there could be a specific facilitation of goal achievement by the individual student, not the least element of which would be the student's successfully passing the course.

*Paul Larkin, Director
Institutional Research*

8/08/77

Table 1

PRINCE GEORGE'S COMMUNITY COLLEGE
Final Grade Distribution

	A Number	A %	B Number	B %	C Number	C %	D Number	D %	P Number	P %	N.C. or F Number	N.C. or F %	OTHER Number	OTHER %
Fall 1974	6,320	21%	7,281	25%	5,596	19%	1,371	5%	834	3%	4,800	16%	3,497	11%
Spring 1975	6,693	22	7,339	24	5,559	18	1,424	5	709	2	5,608	18	3,002	11
Fall 1975	7,082	20	8,329	24	6,496	18	2,076	6	743	2	5,147	15	5,254	15
Spring 1976	7,506	22	8,493	25	6,065	18	1,908	6	529	2	4,775	14	4,989	14
Fall 1976	7,548	21	8,678	24	6,558	18	2,094	6	664	2	4,595	12	6,256	17
Spring 1977	7,317	21	8,115	23	6,495	19	1,982	6	541	1	4,549	13	5,865	17

SOURCE: Institutional Research Center, based on Computer Science Center Report STU 265.

7/14/77

Table 2

PRINCE GEORGE'S COMMUNITY COLLEGE
Summary of Passing and Non-passing Final Grades,
Fall 1974-Spring 1977

	TOTAL Grades	PASSING*		NOT PASSING	
		Number	%	Number	%
Fall 1974	29,699	22,060	74%	7,639	26%
Spring 1975	30,334	22,307	74	8,027	27
Fall 1975	35,127	25,580	73	9,547	27
Spring 1976	34,265	25,173	73	9,092	27
Fall 1976	36,393	26,544	73	9,749	27
Spring 1977	34,864	25,233	72	9,631	28

* A, B, C, D, toward Passing, Audit, or Pass.

SOURCE: Institutional Research Center, based on Computer Science
Center Report STU 265.

7/14/77

Table 3

PRINCE GEORGE'S COMMUNITY COLLEGE

Course Pass Rates and Course Attrition Rates, 1968-1977

	<u>Initial Credit Enrollments</u>	<u>Successfully Completed Courses*</u>	<u>Course Attrition Percent</u>
		<u>Number</u> <u>%</u>	
Spring 1977	34,864	25,233 72%	28%
Fall 1976	36,393	26,544 73	27
Spring 1976	34,265	25,173 73	27
Fall 1975	35,127	25,580 73	27
Spring 1975	30,334	22,307 74	27
Fall 1974	29,699	22,060 74	26
Spring 1974	27,466	20,021 73	27
Fall 1973	29,523	21,583 73	27
Spring 1973	23,941	18,609 78	22
Fall 1972	25,524	18,697 73	27
Spring 1972	22,355	16,875 75	25
Fall 1971	23,659	16,912 71	29
Spring 1971	19,779	14,588 74	26
Fall 1970	21,997	15,890 72	28
Spring 1970	17,210	12,688 74	26
Fall 1969	19,274	13,424 70	30
Spring 1969	13,090	10,080 77	23
Fall 1968	15,969	11,481 72	28

* A, B, C, D, towards Passing, Audit, or Pass.

SOURCE: Institutional Research Center, based on annual reports from the Computer Science Center

7/14/77

UNIVERSITY OF CALIF.
LOS ANGELES

OCT 7 1977

CLEARINGHOUSE FOR
JUNIOR COLLEGES